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## 2013 NISSAN Note OEM Service and Repair Workshop Manual

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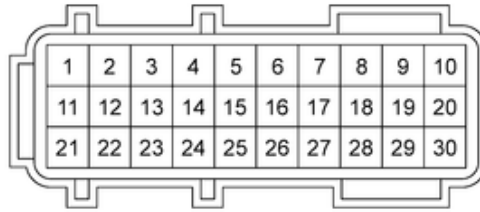
## ADJUSTMENT AFTER INSTALLATION

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When the rear traction motor is replaced, it is necessary to write the resolver offset value and rotor resistance value into the inverter (rear). Refer to [Work Procedure](#).

Sample

# TERMINAL LAYOUT

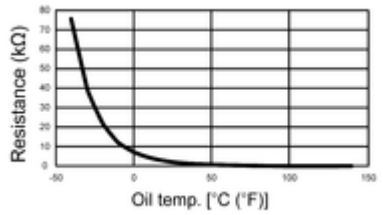
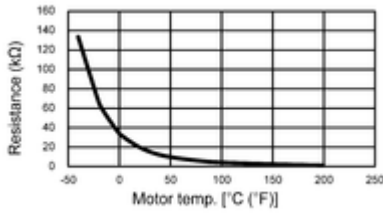


SIEMD-7504842-03-000426266

# PHYSICAL VALUES

**CAUTION:**

- Disconnect the inverter (rear) connector and measure it using wiring harness connector on the vehicle side. While doing so, do not touch the connector terminals on the inverter (rear).
- If the power switch is switched ON when the inverter (rear) connector is disconnected, the other control modules may detect that there is an error with the inverter (rear).

Terminal No. (Wire Color)		Item		Condition	Value (Approx.)
+	-	Signal name	Input/Output		
1 (BR)	11 (GR)	Motor oil temperature sensor	Input	—	Within ±50% of the temperature characteristics chart  SIEMD-7504842-02-000379916
3 (BG)	2 (V)	Motor temperature sensor	Input	—	Within ±50% of the temperature characteristics chart  SIEMD-7504842-01-000379917
4	Ground	Ground 2	—	Always	0 V

Terminal No. (Wire Color)		Item		Condition	Value (Approx.)
+	-	Signal name	Input/Output		
(B)					
13 (R)	12 (L)	Motor resolver signal (S1 - S3)	Input	—	34.6 - 42.4 Ω
14 (B)	Ground	Ground 1	—	Always	0 V
18 (P)	Ground	12V battery power supply	Input	Always	9 - 16 V
22 (Y)	21 (W)	Motor resolver signal (S2 - S4)	Input	—	37.6 - 46.0 Ω
24 (G)	23 (BR)	Motor resolver signal (R1 - R2)	Output	—	8.5 - 12.7 Ω
25* (R)	—	—	—	—	—
26 (G)	Ground	EV system CAN-L	Input/Output	—	—
27 (L)	Ground	EV system CAN-H	Input/Output	—	—
28 (P)	Ground	12V battery power supply	Input	Always	9 - 16 V
29 (Y)	19 (SB)	Motor oil pump communication signal	Input/Output	—	—
30 (LG)	Ground	Power switch ON signal	Input	Power switch: ON	9 - 16 V
				Power switch: OFF	0 V

\*: Not used for control.


**NOTE:**

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

Monitor item	Condition	Value/Status
Motor speed 1	READY state (vehicle is stopped)	Approx. 0 rpm
	During driving	The value changes depending on the vehicle speed.
Inverter input voltage (High voltage)	READY (stop the vehicle) and during driving	Approximately the same as the Li-ion battery voltage
Rotor current value 1	READY state (vehicle is stopped)	Approx. 0 rpm
	During driving	0 - 17.5 A (The value changes depending on the vehicle speed.)
Rotor current value 2	READY state (vehicle is stopped)	Approx. 0 rpm
	During driving	0 - 17.5 A (The value changes depending on the vehicle speed.)
Ignition signal	Power switch ON	Ignition power supply on
Inverter power module temperature	READY state (vehicle is stopped)	Same as the cooling water temperature once the temperature is saturated
	During driving	The temperature changes depending on the vehicle running
Resolver offset value	—	—
Rotor resistance value	—	—
Inverter initial diagnosis	READY state (vehicle is stopped)	Not diagnosed
Inverter high voltage circuit diagnosis result	READY state	OK
Inverter torque control function diagnosis result	READY state	OK
Inverter abnormality judgement 1	READY state	OK
Inverter abnormality judgement 2	READY state	OK
Rotor current diagnosis result	READY state	OK
Stator current diagnosis result	READY state	OK
Inverter over voltage malfunction (High voltage)	READY state	OK
Inverter control status 1	READY state (vehicle is stopped)	Traction
	During driving	Traction
12V battery voltage	Power switch ON	9 – 16 V
Re-programming judgement result	—	—
Key available	—	—
Inverter temperature	READY state	The temperature changes depending on the vehicle running (including when stopped).
Inverter power module high arm IGBT status	READY state	OK
Inverter power module low arm	READY state	OK

Monitor item	Condition	Value/Status
IGBT status		
Li-ion battery abnormality state	READY state	OK
Li-ion battery voltage	Power switch ON	269 – 402 V
Discharge request	READY state	Off
Torque request	READY state (vehicle is stopped)	Approx. 0.0 Nm
	During driving	Changes depending on the vehicle acceleration or deceleration
Inverter activation request	Power switch ON	Off
	READY state	On
Sleep/wake up request	Power switch ON	Wake up request
Ignition signal (CAN)	Power switch ON	Ignition power on
Communication diagnosis permission status	READY state	Permit
Coolant flow	READY state	Changes depending on the vehicle state.
ODO	Power switch ON	Approximately the same as the combination meter ODO
Safety maximum torque	During driving	Changes depending on the vehicle acceleration or deceleration
High voltage relay status	Power switch ON	Close
OTA status	Power switch ON (no OTA request)	No request
Drive prohibition signal	Power switch ON	OK
Safety minimum torque	During driving	Changes depending on the vehicle acceleration or deceleration
Oil pump status	Power switch ON	OK
Stator temperature	READY state (vehicle is stopped)	Same as the cooling water temperature once the temperature is saturated
	During driving	The temperature changes depending on the vehicle running
Rotor temperature	READY state (vehicle is stopped)	It is an estimated value and declines gradually when vehicle is stopped.
	During driving	The temperature changes depending on the vehicle running
Command oil pump speed	READY state (vehicle is stopped)	500 - 3800 rpm (Changes depending on the rear traction motor temperature and oil temperature.)
Oil pump speed	READY state (vehicle is stopped)	500 - 3800 rpm (Changes depending on the rear traction motor temperature and oil temperature.)
Motor speed 2	READY state (vehicle is stopped)	Approx. 0 rpm
	During driving	The value changes depending on the vehicle speed.
Inverter high voltage	READY (stop the vehicle) and during driving	Approximately the same as the Li-ion battery voltage
Motor oil temperature	READY state (vehicle is stopped)	Same as the cooling water temperature once the temperature is saturated
	During driving	The temperature changes depending on the vehicle running
Inverter direct current value	READY state (vehicle is stopped)	Approx. 0.0 A
	During driving	The temperature changes depending on the vehicle

Monitor item	Condition	Value/Status
		running
Motor maximum power	READY state (vehicle is stopped)	Approx. 0.0 kw
	During driving	The value changes depending on the vehicle speed.
Motor power/regeneration status	READY state (vehicle is stopped)	Power mode
	During driving (accelerator pedal ON)	Power mode
	During driving (accelerator pedal OFF)	Regeneration mode
Inverter discharge status	Inverter (rear) discharging	Discharging
	Except above	Not discharged
Inverter control status 2	READY state	OK
Motor estimated torque	READY state (vehicle is stopped)	Approx. 0.0 Nm
	During driving (accelerator pedal ON)	Changes depending on the vehicle speed.
Motor regeneration maximum torque	READY state (vehicle is stopped)	Approx. 0.0 Nm
	During driving (accelerator pedal OFF)	Changes depending on the vehicle speed.
Motor power maximum torque	READY state (vehicle is stopped)	Approx. 0.0 Nm
	During driving (accelerator pedal ON)	Changes depending on the vehicle speed.
Inverter sleep permission	Power switch ON	Prohibit
Motor normalization temperature	Power switch ON	0 - 100% (Changes depending on the rear traction motor temperature.)
Inverter abnormality state	Power switch ON	OK
Inverter status (CAN)	READY state (vehicle is stopped)	Power on 2
Inverter normalization temperature	Power switch ON	0 - 100% [Changes depending on the inverter (rear) temperature.]
Lamp lighting request 2	EV system warning (EV system stopped)When displayed	Request present
	Except above	No request
Lamp lighting request 1	EV system warning (EV system malfunction)When displayed	Request present
	Except above	No request
Inverter coolant temperature	READY state (vehicle is stopped)	Same as the cooling water temperature once the temperature is saturated
	During driving	The temperature changes depending on the vehicle running
U current sensor offset value	—	—
V current sensor offset value	—	—
W current sensor offset value	—	—
Rotor current sensor 1 offset value	—	—
Rotor current sensor 2 offset value	—	—

# Fail-safe

Refer to [Fail-safe](#).

Sample



# Protection Function

Refer to [Protection Function](#).

Sample

# DTC Inspection Priority Chart

SIEMD-7504845

If some DTCs are displayed at the same time, perform inspections one by one based on the priority as per the following list. For DTC, refer to [DTC Index](#).

Priority	Detected items (DTC)	
1	P0A8B-A2 14 Volt Power Module System Voltage	
2	P030A-62 Ignition A Control Signal	
	P0A30-11 Drive Motor B Temperature Sensor	
	P0A30-13 Drive Motor B Temperature Sensor	
	P0A30-4B Drive Motor B Temperature Sensor	
	P0A79-48 Drive Motor B Inverter	
	P0A79-62 Drive Motor B Inverter	
	P0DA3-17 Drive Motor B Inverter Voltage Sensor A	
	P0DA9-00 Hybrid/EV Battery Voltage/Drive Motor B Inverter Voltage Correlation	
	P161D-61 Immobilizer	
	P161E-68 Immobilizer	
	P161F-64 Immobilizer	
	P30D0-11 Drive Motor B Coolant Temperature Sensor	
	P30D0-13 Drive Motor B Coolant Temperature Sensor	
	P30D0-4B Drive Motor B Coolant Temperature Sensor	
	P30E5-04 Drive Motor B Coolant Pump Control	
	P30E5-81 Drive Motor B Coolant Pump Control	
	P30E5-87 Drive Motor B Coolant Pump Control	
	U2143-82 CAN communication error (VCM/HCM)	
	U2143-83 CAN communication error (VCM/HCM)	
	U2143-87 CAN communication error (VCM/HCM)	
	U2144-82 CAN communication error (Li-ion battery)	
	U2144-83 CAN communication error (Li-ion battery)	
	U2144-87 CAN communication error (Li-ion battery)	
	U2150-87 CAN communication error (AIRBAG)	
	3	P0A1C-01 Drive Motor B Control Module
		P0A1C-03 Drive Motor B Control Module
		P0A1C-04 Drive Motor B Control Module
		P0A1C-05 Drive Motor B Control Module
P0A1C-44 Drive Motor B Control Module		
P0A45-04 Drive Motor B Position Sensor		
P0A45-1C Drive Motor B Position Sensor		
P0A55-01 Drive Motor B Current Sensor		
P0AF2-11 Drive Motor Inverter Temperature Sensor B		
P0AF2-13 Drive Motor Inverter Temperature Sensor B		
P0AF2-1C Drive Motor Inverter Temperature Sensor B		
P0AF2-4B Drive Motor Inverter Temperature Sensor B		